

Honeybees

Performance Task

Introduction

Bees have a very important job in the environment. Bees are pollinators. As a pollinator, a bee's job is to carry pollen from plant to plant. Pollen is a yellow powder that plants need in order to grow new seeds. When plants make more seeds, more plants will grow. Many plants, nuts, fruits and berries depend on bee's to get the pollen they need. Many scientists are worried that honeybees are slowly disappearing. So, we as humans need to be very careful to make sure that bees keep on living so they can do their important job in nature.

Big Idea / Essential Questions

Big Idea

- All living things are made of parts that have specific functions.
- Two- and three-dimensional objects can be described, classified, and analyzed by their attributes, and their location can be described quantitatively.

Essential Questions

- How do the structures and functions of living things allow them to meet their needs?
- How do we combine shapes to make different shapes?
- How do we identify a pattern?

G.R.A.S.P.

Goal

Your goal is to learn more about bees and what important job do they do.

Role

You are a scientist studying bees. You want to understand how they live and what they

need in order to survive. You will use this information to help teach people about why bees are so important to us.

Audience

You will present your information to a group of scientists who are interested in what can be done to help bee populations.

Situation

Bees have a very important job in the environment. Bees are pollinators. As a pollinator, a bee's job is to carry pollen from plant to plant. Pollen is a yellow powder that plants need in order to grow new seeds. When plants make more seeds, more plants will grow. Many plants, nuts, fruits, and berries depend on bee's to get the pollen they need. Many scientists are worried that honeybees are slowly disappearing. So, we as humans need to be very careful to make sure that bees keep on living so they can do their important job in nature. In this task, you will need to find out some ways that humans can help bees stay alive so they can continue to do their job in nature.

Products

1. Illustration

Suggested starting product:

Draw a picture of a bee or a beehive.

- What is a bee?
- What does a bee look like?
- What does the inside of a beehive look like?

Illustration - Honeybees

Achievement Levels	1	2	3
Illustration (x1)	Drawing is not very clear and does not quite represent the topic.	Drawing is somewhat clear and somewhat represents the topic.	Drawing is clear and represents the topic.

2. Nonfiction Book

You are going to create a book about honeybees. Each student may make their own book based on your class research discussion. Together as a class you will discuss and include some of the reasons for why the numbers of living honeybees are changing. You may want to provide some suggestions for how people can help honeybees. Each page should have pictures, captions, or a sentence that describes each picture. (Digital books can also be made using programs such as Glogster, Powerpoint or Google Slides.)

- What does a honeybee need to survive?
- Why are some honeybees going away or disappearing?
- How can we make a math problem about honeybees?
- How can we help honeybees?

Storybook - Honeybees

Achievement Levels	1	2	3
Content & Focus (x1)	Book is not informative or is not supported with facts. Does not focus on topic.	Book informs the reader with little information supported by facts. Maintains little focus on topic.	Book informs the reader with some information supported by facts. Maintains some focus on topic.
Conventions (x1)	Shows little evidence of understanding correct spelling, capitalization, and punctuation.	Many errors in spelling, capitalization, and punctuation. Somewhat affects understanding.	All familiar words are spelled correctly, some errors in spelling of content words. Some errors in capitalization, and punctuation, but the errors do not affect understanding.
Penmanship (x1)	Writing is very sloppy.	Writing is somewhat sloppy.	Writing is neat.
Life Science (x1)	Student shows little understanding that plants and animals need certain things to survive.	Student shows some understanding that plants and animals need certain things to survive.	Student shows understanding that plants and animals need certain things to survive.
Structure and Function of Living Things (x1)	Student shows very little understanding that living things have important jobs in nature.	Student shows some understanding that living things have important jobs in nature.	Student shows understanding that living things have important jobs in nature.
Protecting Nature (x1)	Student shows minimal understanding that human action is needed to protect ecosystems and the species that live in that environment.	Student shows some understanding that human action is needed to protect ecosystems and the species that live in that environment.	Student shows an adequate understanding that human action is needed to protect ecosystems and the species that live in that environment.
Mathematical Representation (x1)	Student is unable to represent addition and/or subtraction using objects, drawings, verbal explanations, expressions or equations.	Student represents addition and/or subtraction using objects, drawings, verbal explanations, expressions or equations with minor errors.	Student accurately represents addition and/or subtraction using objects, drawings, verbal explanations, expressions or equations.

3. Poster

After you gather your honeybee information, you need to create a poster (with your class or with a small group) showing the parts of the bee hive. Think about what geometric shape can be found on a bee hive. You will need to include this geometric shape on your poster. Give your poster a title and label the parts.

- What are the parts of a beehive?
- What shape can be found in a beehive?
- How does a beehive help a honeybee to do its job?

Poster - Honeybees

Achievement Levels	1	2	3
Math- Shape Recognition (x1)	Student is not able to recognize or identify a hexagon.	Student is somewhat able to recognize and identify hexagons in a beehive.	Student is able to recognize and identify hexagons as a shape represented in a beehive.
Drawing Details (x1)	Product does not show many details in the drawing of a beehive.	Product shows some details in the drawing of a beehive.	Product shows details in the drawing of a beehive.

Achievement Levels (x1)	1	2	3
Life Science (x1)	Student shows little understanding that plants and animals need certain things to survive.	Student shows some understanding that plants and animals need certain things to survive.	Student shows understanding that plants and animals need certain things to survive.
Structure and Function of Living Things (x1)	Student shows very little understanding that bees have an important job in nature.	Student shows some understanding that bees have an important job in nature.	Student shows understanding that bees have an important job in nature.

4. Research Journal

As a class or with your teacher, use books, the internet, and any other available resources to find as much information as possible about the lives of honeybees. Record important facts in a class research journal. (Facts can be recorded using words and pictures.)

- Why are honeybees important?
- What does a honeybee need to survive?
- How does a honeybee do its job?

Research - Honeybees

Achievement Levels	1	2	3
Participation (x1)	Student does not really participate in shared research.	Student somewhat participates in shared research.	Student participates in shared research.
Life Science (x1)	Student shows little understanding that plants and animals need certain things to survive.	Student shows some understanding that plants and animals need certain things to survive.	Student shows understanding that plants and animals need certain things to survive.
Structure and Function of Living Things (x1)	Student shows very little understanding that living things have important jobs in nature.	Student shows some understanding that living things have important jobs in nature.	Student shows understanding that living things have important jobs in nature.
Protecting Nature (x1)	Student shows minimal understanding that human action is needed to protect ecosystems and the species that live in that environment.	Student shows some understanding that human action is needed to protect ecosystems and the species that live in that environment.	Student shows an adequate understanding that human action is needed to protect ecosystems and the species that live in that environment.

5. Skit

Create and perform a skit that shows how honeybees gather pollen from flowers and take it back to the hive. The skit will be used as a public service announcement, perhaps on TV or as a radio ad, so be sure it is informative and creative. The information in this skit will help others understand why the job of a bee is so important to our environment. Get creative and have fun with some props or costumes for this performance.

- What is the relationship between a honeybee and a flower?
- What is Pollen?
- Why is pollen important?
- Why are bees so important to the environment?

Skit - Honeybees

Achievement Levels	1	2	3
Speaking (x1)	Student demonstrates a lack of clear, audible speech.	Student demonstrates somewhat clear, audible speech.	Student demonstrates sufficiently clear, audible speech.
Life Science (x1)	Student shows little understanding that plants and animals need certain things to survive.	Student shows some understanding that plants and animals need certain things to survive.	Student shows understanding that plants and animals need certain things to survive.
Structure and Function of Living Things (x1)	Student shows very little understanding that living things have important jobs in nature.	Student shows some understanding that living things have important jobs in nature.	Student shows understanding that living things have important jobs in nature.
Protecting Nature (x1)	Student shows minimal understanding that human action is needed to protect ecosystems and the species that live in that environment.	Student shows some understanding that human action is needed to protect ecosystems and the species that live in that environment.	Student shows an adequate understanding that human action is needed to protect ecosystems and the species that live in that environment.
Participation (x1)	Student does very little to participate.	Student somewhat participates to add drama in presenting subject matter.	Student participates to add drama in presenting subject matter.

6. Journal Prompt

Suggested final product can be written or orally dictated.

Tell me about what a honeybee does and why a honeybee is important.

- What does a honeybee do?
- How does a honeybee do their job?
- Why is a honeybee important to nature?
- How can humans help honeybees?

Journal Prompt-Honeybees

Achievement Levels	1	2	3
Oral Dictation (if journal response is given orally) (x1)	Student response is not audible and lacks coherent sentences.	Student response is partially audible and uses somewhat coherent sentences.	Student response demonstrates audible speaking in mostly coherent sentences.
Content (x1)	Response contains a limited amount of accurate, factual information.	Response contains some accurate, factual information about the topic.	Response contains mostly accurate, factual information about the topic.
Structure and Function of Living Things (x1)	Student shows very little understanding that living things have important jobs in nature.	Student shows some understanding that living things have important jobs in nature.	Student shows understanding that living things have important jobs in nature.